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Malartic Hygrade
Gold Mines
(Canada) Ltd.



Annual Report
1980



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**Malartic Hygrade
Gold Mines
(Canada) Ltd.**

Corporate Data

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J. S. Belton
President

Michael D. De Rosa
Vice-President

Donald W. Beaton
Secretary-Treasurer

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Toronto, Ontario, Canada

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To The Shareholders

Your directors are pleased to present herewith their Annual Report together with audited financial statements for the year ended September 30, 1980.

In years to come, the year 1980 may well come to be viewed as a watershed in the history of your company. In May 1980, a long standing problem, which had been the principal feature of your company's relationship with Camflo Mines was resolved, and an agreement was finally reached under the terms of which it is anticipated that Camflo will mine gold ore from your company's property for many years into the future.

Under the terms of the agreement between your company and Camflo Mines dated May 28, 1980, Camflo Mines has been authorised by your company to continue to mine the gold ore zones extending into your company's property which they have previously mined to our common boundary. Camflo is to advance the capital necessary for the operation and existing Camflo facilities are to be used. The operations are being, and will continue to be, supervised jointly by the managements of the two companies. The net profits from production will be shared 60 (Sixty) per cent to your company and 40 (Forty) per cent to Camflo.

This agreement was submitted to shareholders for their approval at a Special General Meeting in July. Copies of the agreement, which was ratified by the shareholders of this company at that meeting, can be obtained on request by new shareholders or other interested parties. The program to develop ore reserves got under way immediately following the Special General Meeting at which shareholders approved the

agreement and initial production is scheduled to begin during 1981. The agreement calls for a minimum annual production of two hundred thousand tons within two years.

In furtherance of this objective diamond drilling was commenced into your company's property from underground drilling stations located on the 2250 foot and 2400 foot levels of the Camflo mine during the third calendar quarter of 1980. In November drifting began into ore indicated by the drilling program on these levels whilst a diamond drilling program commenced on the 2100 foot level.

It is anticipated that similar exploration and development will be carried out from the 1950, 2100, 2550, 2700, 2850 and 3000 foot levels. Regular stoping should be started in the fall of 1981.

The geology and economic potential of the porphyry ore zone, as it continues on your company's property, has been described in reports prepared by B. L. Hodge and Partners of London, England.

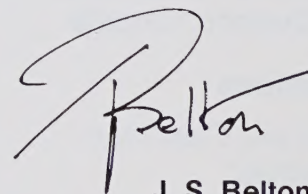
Their initial report dated October 1974 was originally reproduced in the company's Annual Report in 1975 and again last year. A new report has now been prepared and forms a part of this Annual Report. This new report provides shareholders with a more comprehensive view of the situation on the whole of the company's property.

At this time, the management and Board of Directors of your company wish to especially thank shareholders for the almost unanimous support we have received from you throughout the tumult of recent years. With hindsight, it is considerably easier to determine the merit of any given

course of action, whereas the advocacy of such usually does not suffer for want of critics whether on the merits or indeed upon less tenuous grounds. I am pleased to report that less than a dozen shareholders, representing a mere fraction of one per cent of the outstanding capital stock of the company, complained to your management about the policy, formulated and initiated by the founder and former President of your company, to deal with the company's ongoing difficulties, vis-a-vis its property, which ultimately manifested themselves through Messrs. Proulx and Mercier of the Quebec Securities Commission in April 1974. The events of 1980 reflect the success of this policy.

Now that your company's property is scheduled to commence production, shareholders will, no doubt, wish to know what policy it will follow with respect to dividends and the development of the balance of the property and these subjects are dealt with in another section of this report entitled Statement of Policy.

On behalf of the Board of Directors



J. S. Belton,
President



Statement of Policy

A number of shareholders have enquired and expressed concern about the policies your company will pursue now that an agreement has been concluded between this company and Camflo Mines for the development of the continuation of the ore zones mined by Camflo to our common boundary.

The management and Board of Directors of your company are well aware that shareholders have invested in this company because it is a gold mine and only because it is a gold mine. This fact, in the view of your directors, in and of itself, really determines the policies we are bound to pursue.

It is the intention of your directors that your company should confine its activity to the development of its property in Malartic Township and, with the

exception of such funds as are required for its development, to pay the greater part of earnings in dividends. This, of course, means that the exact amount of each and any dividend would vary in much the same way as income, rather than being fixed.

It is not the purpose of this policy statement, nor would it be meaningful in the context of same, to attempt to forecast earnings. While a voluminous amount of information is available relating to the production history of the zones to be mined, the balance of their productive life remains of an indeterminate nature. Earnings, obviously, shall be dependent upon the availability of economically viable ore and will vary with changing costs and the price of gold.

As can be seen from the financial statements which

form a part of this annual report, your company's financial position is strong — unencumbered cash reserves stand at an all time high and no additional external financing, either by way of equity or debt, should be required in order to pursue the company's business.

Classical investors normally hold the shares of gold mining companies as income producing substitutes for the metal itself and prefer that such companies not be involved in other businesses, because other undertakings simply dilute the effectiveness of the substitute for gold function which the shares of purely gold mining companies serve. The Board of Directors of this company anticipate that your shareholdings in it will meet this classical objective for you as an investor.

Report on Gold Potential of the Malartic Hygrade Gold Mines (Canada) Limited Property, Malartic Township, Quebec, Canada for Malartic Hygrade Gold Mines (Canada) Limited

B. L. Hodge and Partners
Woodcock House
37 High Street, Wimbledon
London SW19 5BY

December 1980

1. Introduction

The Malartic Hygrade property is located in Malartic township within the Val-d'Or — Malartic gold-mining area of northwest Quebec, the area being situated some 270 miles northwest of Montreal and about 70 miles east of the Ontario border, as shown in Figure 1. More specifically, the 1,450 acre property is centred some 2.5 miles north of provincial highway 117 and the Canadian National railway line running between Val-d'Or and Malartic, and it is bordered immediately to the south by the properties of Camflo and Willroy (rights to the latter are held by Camflo), as illustrated, with access details, in Figures 1 and 2. Normal access to the property is gained from the highway via a reasonably-good but variable-quality dirt road which runs to the Malartic Hygrade mine, the same road also giving access en route to the former Marban and Norlartic mines. An alternative access route comprising a rather rough dirt road runs from the Camflo mine to join the normal route inside the Malartic Hygrade property, the Camflo mine being reached directly by way of a regularly-graded good-quality dirt road extending from provincial highway 117. Apart from the roads to the Malartic Hygrade mine, there is no ready access to the remainder of the property.

In common with the surrounding area, the property has a relatively monotonous low relief at a mean height of around 1,000 feet above sea level, with the gentle topography ranging little more than 50-100 feet. The vegetation consists of muskeg with a relatively dense cover of tag alders, spruce, the occasional balsam, and some poplar and birch on higher ground. Parts of the area are also quite marshy, the extent of flooding depending largely upon beaver activity.

Throughout the area and including the property, there is a widespread cover of superficial deposits consisting of Cainozoic-age (Pleistocene

and Holocene) clays, sands and gravels of mainly glacial but partly post-glacial origin. These superficial deposits are of varying thickness and they effectively mask much of the solid rocks, exposure of the latter being poor at an estimated level of approximately 5 per cent. Combined with the relatively dense vegetation cover, this makes comprehensive economic-mineral assessment of the whole area difficult, with the possibility that significant mineralization may remain concealed and undiscovered. In view of the fact that the above factors severely hamper exploration, further discoveries will depend upon sophisticated geophysical surveying followed by rigidly controlled programmes of diamond drilling, or simply by the latter alone when there are already targets indicated. In this context, it is pertinent to mention the porphyry intrusion centred some 1,200 feet southwest of the Malartic Hygrade mine shaft, the occurrence having been defined and partly explored in recent times by means of geophysics and diamond drilling, as described in detail in the October 1976 and 1977 reports of B. L. Hodge and Partners.

Imperial measurements, as opposed to metric, are used throughout the consideration herein because such a system is adopted with no intention of change at the Camflo mine, the only exception to application of imperial measurements being in use of the short ton (2,000 pounds). The same practice as in the Camflo mine has been followed because exploitation of the Camflo porphyry extension and adjacent rocks on the Malartic Hygrade property from the Camflo mine will be the largest and most immediate source of gold under current circumstances.

2. Regional Geology and Gold-Mineralization Controls

The Val-d'Or — Malartic gold-mining area is underlain by Precambrian-age (essentially Archean with only local

Proterozoic) volcanic, sub-volcanic and sedimentary rocks. Figure 2 illustrates the general regional configuration of the respective rock types, with the volcanics mainly lying to the northeast of the sediments, although volcanics interdigitate with the sediments on a regional scale, especially along and to the northeast of the Cadillac Break. The volcanics, which lie within the Malartic Group throughout the specific area under consideration, largely consist of intermediate to basic lava flows (basalt, locally termed andesite, now metamorphosed to comprise metabasalt), ultrabasic lava flows (peridotite, now metamorphosed to comprise serpentinite) and pyroclastics (tuff and agglomerate). Within the sediments, which lie within the Kewagama Group throughout the specific area under consideration, the dominant rock type is graywacke made up of argillites and siltstones, but conglomerates are developed to varying extents and iron formations occur in places. Numerous sub-volcanic siliceous and related intrusions cut both the volcanic and sedimentary rocks, with compositions ranging from gabbroic through dioritic to monzonitic and granodioritic, in various sizes and forms, one being in the order of a small batholith, whilst the others comprise large and small plutons, chimney-like masses, sills and dykes. Notable amongst the intrusives in the context of this consideration are chimney-like masses (stocks) of monzonite and similar porphyry (locally termed feldspar porphyry) and sills of gabbro (locally termed diorite).

The area lies within the irregular Malartic Syncline and the regional strike of the rocks is parallel to the northwest-southeast synclinal axis, with steep dips, but the strike and dip are complicated by complex folding in places, particularly by major drag folds that most obviously affect the volcanics and associated gabbro sills but also influence the sediments. The dominant structural feature of the region is a major fault zone, known as the Cadillac Break (Cadillac-Bouzan fault), which essentially

traverses the sediments and runs approximately parallel to the strike relatively close to the contact zone between the sedimentary and volcanic rocks. The Break can be traced eastward for about 200 miles from Matachewan in Ontario through the mining centres of Kirkland Lake, Larder Lake, Noranda, Cadillac, Malartic and Val-d'Or. Movement along this strong fault zone persisted over a long period of time, probably throughout the whole period of volcanic activity and sedimentation when the related rocks were formed, and subsequent to their formation. Furthermore, there is ample evidence of vertical and lateral movements along the fault zone, with a large variety of intrusive dykes, sills and stocks as well as quartz-carbonate veins within it. The fault zone dips steeply north, and, in view of its length, it probably persists to a considerable depth below surface, with most of the sub-parallel faults and shears in the country rocks up to 10 miles north of it joining up in depth. A notable example of such a sub-parallel structure in this consideration is the Norbenite-Norlartic fault because it traverses the Malartic Hygrade property. In addition to the sub-parallel structures, it should be noted that there are conjugate faults and shears at or close to right angles to the Break.

Gold occurs at many locations along the Cadillac Break and related faults and shears, a large proportion of gold production to date in the area having been derived from such situations. As a result of this, until recently it was generally considered that the Break and related structures were the main controlling factors involved in the formation of economic concentrations of gold, and that significant gold concentrations would not be discovered elsewhere. Although the latter certainly does not reflect the total position with respect to genesis of the gold deposits, the existence of openings in the rocks caused by folding, faulting, shearing, fracturing and shattering was essential for gold accumulation because the ore-bearing solutions required openings for migration and gold deposition at the appropriate stage. Thus, an important criterion for the concentration of gold into economic deposits is structural.

Another important criterion is stratigraphical because it is undoubted





that the gold is genetically related to the sub-volcanic siliceous intrusions which fed the later stages of volcanicity at or near the top of each volcanic phase, and which pierce the volcanic pile as well as the adjacent sediments in places. Since gold has a marked tendency to come out of solution at or close to its source, the sub-volcanic siliceous intrusions comprising stocks, dykes and sills of monzonite and similar porphyry present attractive exploration targets, as exemplified by the gold production from the Camflo porphyry and many other locations, such as the East Malartic, Lamaque, Marban, Norlartic, Sigma and Siscoe mines.

A third important criterion is a favourable geochemical environment because gold deposits not only occur in the sub-volcanic siliceous intrusions, but also in the neighbouring wall rocks, particularly where the latter are competent and rich in iron. Magnetite and sulphide-iron formations together with gabbroic rocks are generally the most favourable, but some tuffaceous and sedimentary rocks containing appreciable amounts of iron also bear deposits where ore-bearing solutions seeped into them along structural openings in proximity to the intrusions. Although the ultrabasic rocks are rich in iron and fracture readily, their own soft alteration products tend to fill the openings thereby rendering them impervious to ore-bearing solutions.

A number of examples exist to illustrate the importance of the three criteria considered briefly above, but the Camflo gold deposits are particularly notable, especially in the context of this consideration, because they display a relationship to structure, stratigraphy and geochemistry. Thus, the ore in the Camflo mine largely occurs within an irregular stock of monzonite porphyry, designated the Camflo porphyry, which is intruded into sediments close to the volcano-sedimentary junction at the nose of a major drag fold, with the concentration of gold in the porphyry apparently partially localized by a series of relatively shallow-dipping northwest-trending sub-parallel faults and shears that cut the intrusion at different levels. In addition, ore zones occur within the adjacent sediments into which the porphyry is intruded, especially along the sub-parallel structures that pass through the porphyry where they intersect

the iron formations within the sediments. Gabbro sills in proximity to the porphyry also carry significant ore zones for some distance away from the porphyry along extensions of the sub-parallel structures that intersect the intrusion.

3. Malartic Hygrade Property

3.1 Detailed geology

The property is completely underlain by Malartic Group volcanic and sub-volcanic rocks, as described in Section 2, the distribution and configuration of which are illustrated in Figure 2. Specific mention is warranted here of the sizeable stock of granodioritic to monzonitic porphyry, designated the Malartic Hygrade porphyry, which is centred some 1,200 feet southwest of the Malartic Hygrade mine shaft, in view of its definition in recent times. Furthermore, because of their importance to this consideration of the Camflo gold deposits, cognizance must also be given to the geology of the Camflo and Willroy properties where they border the southern margin of the Malartic Hygrade property, and appropriate details have been included in Figure 2.

Basically, the junction between Malartic Group volcanics and sub-volcanics to the northeast and Kewagama Group sediments to the southwest traverses the Camflo and Willroy properties in a northwest-southeast direction. Intruded into the sediments close to the volcano-sedimentary junction is the Camflo porphyry, the sediments in proximity to the intrusion mainly comprising fine-grained graywacke, but immediately adjacent to the volcanics is a 25 feet thick bed of altered conglomerate followed by a 10-40 feet thick magnetite-iron formation and a further 10 feet thick magnetite-iron formation separated from the first by some 300 feet of graywacke. Gabbro sills are particularly common within the Malartic Group rocks close to the volcano-sedimentary junction, and one sill lying on the contact between the volcanics and sediments borders the porphyry intrusion down to its lowest known depth.

In common with the regional pattern, the overall strike of the rocks is northwest-southeast, and the dip is generally steep to the northeast, but the structure is complicated by folding with some faulting and shearing.

The most prominent structure is a major drag fold, which is approximately Z-shaped in plan, and which contorts the regional strike over much of the property, with the Malartic Hygrade porphyry intruded into its southwest nose. Although not as readily apparent in Figure 2 as the structure referred to above, there is also a major drag fold in proximity to the Camflo porphyry, the stock being intruded at the nose of the fold. There are also various fault and shear zones cutting the volcanics, sub-volcanics and sediments, with the most important sub-parallel to the northwest-southeast trend of the Cadillac Break, but with a conjugate set at or close to right angles to the Break. Of those sub-parallel to the Break, reference has already been made in Section 2 to the importance of the series of closely-spaced sub-parallel faults and shears cutting the Camflo porphyry and adjacent rocks. In addition, because of its regional prominence, further reference is appropriate to that made in Section 2 with respect to the Norbenite-Norlartic fault, which trends sub-parallel to the Cadillac Break and traverses the property.

3.2 Gold potential

A number of gold intersections have been made by boreholes drilled in different geological environments on and adjacent to the property, the locations of all known occurrences being shown in Figure 2. Based on existing knowledge, most of these occurrences appear to represent isolated gold-bearing quartz veins and disseminations of limited extent and quality, although the veins are of exceptionally high grade in some instances, especially in zones close to the Malartic Hygrade mine shaft.

The most important known gold occurrence is in the extension of the Camflo porphyry at depth, projection of the porphyry onto the property based on all available data being illustrated in Figures 2, 3 and 4. Extension onto the property of the gold-bearing rocks adjacent to the Camflo porphyry is also of significance not only in depth but at surface, the latter situation being of potential importance in view of the fact that gabbro sills outcrop in the southwest part of the Malartic Hygrade property adjacent to the boundary with the Camflo property. In addition, gabbro sills occur elsewhere on the property, particularly in

the northwest, and they could prove to be of significance for gold in favourable structural situations, such as along the line of the Norbenite-Norlartic fault. Indeed, the whole length of the latter and related structures on the property must be regarded as worthy of more attention than they appear to have enjoyed previously, especially as gold discoveries have already been made in such situations, including occasional minor intersections in boreholes on and adjacent to the property, as well as deposits at the Norlartic, Marban and Little Long Lac mines short distances to the southeast along the main structure and a sub-parallel unit.

Finally, but with by no means the lowest priority, the Malartic Hygrade porphyry warrants further consideration in view of the numerous trace and minor gold values, with one of 0.16 ounces per ton, reported for various intersections made during recent exploration drilling programmes, together with the fact that close petrographic comparability of the rock comprising the intrusion with that of the Camflo porphyry suggests a common origin. Furthermore, the possibility of other similar porphyry intrusions occurring on the property should not be overlooked.

Most of the above situations have been considered in some detail in the October 1974, October 1976 and December 1977 reports of B. L. Hodge and Partners, which have been variously published in full or in part in the 1975, 1976, 1977 and 1979 Malartic Hygrade annual reports. Consequently, the respective situations are reviewed as concisely as possible, including any new and additional data, in an itemized manner below.

3.2.1 Camflo porphyry extension

The geological environment of the porphyry intrusion has been adequately described in Sections 2 and 3.1, its general location in relation to the Camflo mine shaft being shown in Figure 2. In detail, the intrusion comprises an oval stock with inclusions of sediments, and it is irregular in shape, but in plan it has overall dimensions of 250-300 feet in a northnorthwest-southsoutheast direction and 550-600 feet in an eastnortheast-westsouthwest direction, as illustrated in Figures 2 and 3. Located at the nose of a major drag fold, the intrusion follows the northeast plunge of the structure down-

wards, roughly maintaining a position between the two magnetite-iron formations referred to in Section 3.1. In this position, the average dip direction of the intrusion is north 55 degrees east at an average dip angle of 55 degrees, as illustrated in Figures 2, 3 and 4, although it should be noted that the dip angle shown in Figure 4 is unavoidably exaggerated due to the configuration and composite nature of the vertical section. With this strike and angle of dip, the intrusion commences to pass onto the Malartic Hygrade property at a depth below the Camflo mine-shaft collar of about 1,950 feet, and it appears that passage of the main mineralized mass of the intrusion takes place between the depths of about 2,100 feet and 2,800 feet, although complete passage of the whole of the intrusion is influenced by irregularities in its shape and dip so that essentially unmineralized porphyry occurs on the Camflo property to at least 3,150 feet depth.

The depth to which the intrusion persists on the Malartic Hygrade property is not known at this stage, but it is completely reasonable to assume continuity to a depth of at least 3,500 feet, especially as the intrusion has already been proved to extend over a vertical depth of more than 3,000 feet from surface, and a similar intrusion is worked to a depth of 3,600 feet in the Lamaque mine on the outskirts of Val-d'Or. Furthermore, on a much more speculative basis, it would not seem unreasonable to suggest that the intrusion could persist in depth to about double its proved extent, that is to say, to a depth of 6,000 feet. The configuration in plan of the porphyry at various depths is illustrated in Figures 2 and 3, the positions and shapes down to the 2,250 feet level being actual, whilst the positions and shapes at depths of 4,000 feet and 6,000 feet have been respectively projected by application of the dip data quoted above and by use of the plan shape at the 2,250 feet level in the absence of specific data.

Much of the porphyry comprising the intrusion is highly fractured in an irregular manner, except for one persistent series of sub-parallel faults and shears. These structures lie 10 feet to 150 feet apart, strike north 55 degrees west and have an average dip of 43 degrees northeast, only one of them being illustrated in Figure 2, but more are shown in Figures 3 and

4, as appropriate. Reference has already been made in Section 2 to the importance of such structures in localizing gold within the porphyry as well as in the adjacent sediments and gabbro sills, the openings created by the structures having apparently provided channels for the migration of gold-bearing mineralizing fluids, whilst the irregular fractures provided the access and/or sites for gold deposition within the porphyry and adjacent rocks. The total genetic control of the ore zones within the intrusion has not yet been fully ascertained, but approximately 25 per cent of the porphyry comprises ore with the remainder almost barren, although ore appears visually to be almost identical to barren porphyry, except where the ore is particularly rich. In general, the richer ore zones, averaging up to 0.75 ounces of gold per ton, contain 3-5 per cent of white-grey quartz stringers and 1-3 per cent of disseminated pyrite, with small specks of visible gold common in the quartz stringers and on the faces of pyrite crystals; lower grade ore, averaging 0.30 ounces of gold per ton, and much of the completely barren porphyry contain 0.5-1 per cent of quartz stringers and 0.5-1 per cent of pyrite, whilst porphyry containing no quartz stringers bears very little pyrite and is uniformly barren. Individual ore zones within the porphyry are highly irregular in size, shape and distribution, as illustrated in Figures 3 and 4, with dimensions as wide as 130 feet, over 400 feet long and more than 400 feet deep, but often much smaller.

There is no known ore in the porphyry comprising the intrusion above a level of 350 feet and the main ore zones occur below the 450 feet level. From the latter level down to the

2,100 feet level, where the porphyry-ore zones commence to pass onto the Malartic Hygrade property, it has been conservatively calculated that the intrusion yields (ore mined and still in place) an average 2,300 tons per vertical foot of porphyry ore (including ore in intimately associated sediments) at an average recovered grade of 0.251 ounces of gold per ton, there being no reason to modify these figures significantly in the light of information from lower levels. However, it should be noted that there is a considerable degree of variation in the tons per vertical foot of porphyry ore and there is also marked local variation in grade both laterally and vertically, but lows at one point are balanced by highs at another to yield the average quoted above. Furthermore, it should also be noted that, due to the spectacular increase in the world price of gold in recent times, it has become possible to mine and process substantially lower grade ore on a viable basis, and this has effectively increased the available tons per vertical foot, thereby increasing the total amount of gold recoverable from the porphyry. Although it is of pertinence to note this latter fact, it is not intended to take it into consideration for present purposes because of quantification problems and in order to introduce a further contingency factor, as well as to maintain comparability with previously published figures. Thus, based on the available data and the contingencies relating thereto presented and considered above, the estimated quantities of porphyry ore and gold contained therein at various levels on the Malartic Hygrade property are tabulated below.

Camflo mine level (feet)	Tons ore per vertical foot	Total tons ore	Cumulative total tons ore	Ounces gold per ton ore	Total ounces gold	Cumulative total ounces gold
450-2,100	—	—	—	—	—	—
2,100-2,400	300	90,000	90,000	0.251	22,590	22,590
2,400-2,600	810	162,000	252,000	0.251	40,662	63,252
2,600-3,200	2,050	1,230,000	1,482,000	0.251	308,730	371,982
3,200-3,500	2,300	690,000	2,172,000	0.251	173,190	545,172
3,500-4,000	2,300	1,150,000	3,322,000	0.251	288,650	833,822
4,000-6,000	2,300	4,600,000	7,922,000	0.251	1,154,600	1,988,422

It must be emphasized that none of the estimated quantities of porphyry ore and gold contained therein quoted above can be regarded as proved reserves within the strict terminology of the minerals industry until further progress has been made with the exploration and development programme that is now in hand consequent upon the agreement dated 28 May 1980 made between Malartic Hygrade and Camflo. Furthermore, for the reasons considered above pertaining to continuity of the porphyry intrusion in depth, the estimates become progressively more speculative with increasing depth, but it is worthy of repeat that there are sound reasons for assuming continuity to a depth of at least 3,500 feet. It is also significant to note that the relatively limited amount of work on the exploration and development programme that has been conducted from the 2,100 feet, 2,250 feet and 2,400 feet levels in the Camflo mine onto the Malartic Hygrade property has come fully up to expectations in already more than verifying the estimate for the 2,100-2,400 feet interval quoted in the table above.

The difficulties involved in visually differentiating between barren porphyry and ore, combined with the highly irregular and unpredictable size, shape, distribution and grade of the ore zones, renders initial exploration together with subsequent development and exploitation of the porphyry intrusion problematical. Such problems have been effectively solved by Camflo in a commendably efficient and cost-effective manner by devising and implementing a meticulously controlled system of detailed diamond drilling from underground stations at the various levels, followed by development drifting and sampling ahead of mining, with the appropriate mining method adopted within an established pattern in a flexible manner on the basis of the findings for any particular ore zone in the porphyry. Incidentally, modifications to this system are also adopted for the narrower ore zones in the adjacent sediments and gabbro sills. Mining is effected by way of a 3,365 feet deep shaft from which main levels are cut every 150 feet down to 3,300 feet, except between 900 feet and 1,500 feet where the spacing is 200 feet. The shaft has three main compartments, but, from between the 1,100 feet and 1,300 feet levels downwards, there is a

fourth compartment equipped with a separate hoist in order to facilitate shaft deepening in stages without interrupting production. The existing main hoist is rated as capable of reaching a depth of 5,000 feet.

3.2.2 Malartic Hygrade porphyry

The recent definition and partial exploration of this porphyry intrusion has already been referred to in Sections 1 and 3.1, its location centred some 1,200 feet southwest of the Malartic Hygrade mine shaft being shown in Figure 2. In detail, the intrusion comprises a pod-shaped stock extending over a westnorth-west-east-southeast strike length of some 1,900 feet, with a maximum true width of around 350 feet, so that it is about three times the size of the Camflo porphyry. The porphyry is intruded into the southwest nose of the major Z-shaped drag fold that contorts the northwest-southeast regional strike over much of the Malartic Hygrade property, and it has an approximate 60 degrees dip north in the west with an almost vertical dip in the east. In view of the location and dip of the Malartic Hygrade porphyry in relation to the in-depth projection of the Camflo porphyry, as illustrated in Figure 2, it is not totally inconceivable that the two coalesce at depth (which is supported by petrographic comparability of the rock comprising the intrusions), although such a possibility can only be regarded as speculative at this stage.

Exploration of the intrusion by diamond drilling has clearly shown that it is composite, with at least two major porphyry phases of granodioritic to monzonitic composition, the occurrence of pyrite being sparse and quartz stringers relatively rare. Furthermore, no economically significant gold values have yet been discovered by drilling of the intrusion, although numerous trace and minor values of up to 0.04 ounces of gold per ton have been proved, with one isolated value of 0.16 ounces of gold per ton. Thus, the results of exploration on the intrusion have not been particularly encouraging so far, although the porphyry has only been investigated by a relatively limited number of boreholes up to date (a total of 12 during the 1976 and 1977 programmes), with the maximum depth of intersection 865 feet below surface and most of the intersections made at considerably shallower

depths than this at around 600 feet below surface and above.

In view of the fact that some gold has been proved to occur in the intrusion, albeit essentially in trace and minor amounts, together with the fact that close petrographic comparability of the rock comprising the intrusion with that of the Camflo porphyry suggests a common origin (which is supported by the tentative suggestion above relating to coalescence in depth), it is considered that further exploration is justified. In this context, it is of pertinence to recall that the Camflo porphyry carries no known ore above a level of 350 feet below surface and that the main ore zones occur below the 450 feet level. Furthermore, the Camflo porphyry was apparently barren when it was first intersected in depth by drilling due to the irregular size, shape and distribution of the ore zones within it. Thus, the possibility exists that the relatively limited number of boreholes drilled to date have simply not intersected the sizeable porphyry in favourable situations, such as in proximity to similar sub-parallel faults to those which are intimately associated with the ore zones within the Camflo porphyry and which may traverse the Malartic Hygrade porphyry in depth.

Further exploration of the Malartic Hygrade porphyry will initially require a comprehensive programme of diamond drilling to depths in excess of 1,000 feet below surface, with borehole sites located appropriate distances to the north of the intrusion in order to cater for its vertical to relatively steep northerly dip. With respect to such exploration and subsequent development activity, it is of significance to note that an exploration/development drift on the 400 feet level extends from the Malartic Hygrade mine shaft in a southwest direction to within some 225 feet of the projected surface outcrop of the intrusion, the drift having been driven during mining operations conducted in the early 1960s for another purpose referred to in Section 3.2.4(b)(ii).

3.2.3 Gabbro sills

These locally-termed diorite sills have already been adequately described in terms of their basic geological environment and gold potential in Sections 2 and 3.1, whilst their overall distribution and adjacent to the Malartic Hygrade property is illustrated in Figure 2, with

details of the sills at defined locations in proximity to the Camflo porphyry shown in Figures 3 and 4.

Due to the fact that they pass onto the Malartic Hygrade property in depth, the sills in proximity to the Camflo porphyry are of most immediate importance, especially as they have been proved to contain significant ore zones (referred to as diorite ore in the mine) for some distance away from the porphyry along the sub-parallel faults and shears that also intersect the intrusion. The faults and shears are surrounded by prominent haloes of silicification in the range of 10-50 feet wide, whilst the fault/shear zones are in the range of 1-10 feet wide, contain about 50 per cent of quartz with 1-30 per cent of pyrite, and the gold content varies roughly with the amount of pyrite within a range of 0.01-0.40 ounces of gold per ton of diorite ore. Above the Camflo mine 1,300 feet level, less than 5 per cent of the fault/shear zones in gabbro within 1,000 feet of the porphyry make ore grade, and what ore occurs is essentially in small lenses. However, at and below the 1,300 feet level, about 25 per cent of the zones are ore grade, and one stope on the 2,250 feet level is some 800 feet long in gabbro, as illustrated in Figure 3. The diorite ore along the fault/shear zones comprises only about 10 per cent of the total ore discovered to date in the Camflo mine, and, because of its extremely irregular nature and unpredictable mode of occurrence, it is impossible to quantify the potential on the Malartic Hygrade property in a realistic manner. Nevertheless, the qualitative potential is readily apparent, and exploration to define the ore zones, followed by development and exploitation, will be effected in due course in the manner outlined in Section 3.2.1 relating to the Camflo porphyry extension.

Extension in outcrop of gabbro sills in the southwest part of the Malartic Hygrade property adjacent to the boundary with the Camflo property is also of potential importance because the sills could prove to be gold bearing. In this context, apart from the underground potential, it should be noted that even relatively low-grade material in sufficient quantity at and close to surface could prove to be of significance because of the possibility that it might lend itself to a low-grade high-tonnage open pit-mining operation

with gold extraction by leaching. For similar reasons, gabbro sills occurring elsewhere on the property warrant consideration, particularly in the northwest, because they could prove to be gold bearing in favourable structural situations, such as along the line of the Norbenite-Norlartic fault. Exploration of appropriate locations will require definition of targets by the collation of all available information and fieldwork, including detailed geophysics, followed by comprehensive diamond drilling programmes.

3.2.4 Quartz veins and disseminations

Several gold-bearing quartz veins and disseminations have been defined by numerous boreholes drilled during the period extending from 1935 by various parties in different geological environments on and adjacent to the property, the locations of all known occurrences being shown in Figure 2. Of the occurrences, the most important are those lying in proximity to the Malartic Hygrade mine shaft, but all are considered in an itemized manner below.

(a) Malartic Hygrade mine

Three significant vein zones, previously designated numbers 1, 2 and 3, occur in proximity to the Malartic Hygrade mine shaft, and it was to exploit these that the mine was developed during the early 1960s, the shaft being 450 feet deep with levels cut and partially developed at depths of 250 feet and 400 feet. The vein zones occur in the core of the major Z-shaped drag fold described in Section 3.1, with the mineralization therein comprising small and irregular but exceptionally high-grade gold-bearing quartz veins filling fractures in the metabasalts and serpentinites, with gabbro intrusions of limited extent and feldspar porphyry dykes partially associated in the case of number 2 and 3 vein zones.

Contemporary consultants' reports, dated 11 January 1961 by Dr. W. N. Ingham, 25 January 1962 by Mr. G. H. Dumont, and 21 February 1964 by Mr. G. P. Thoday (with subsequent reports of similar content to the latter dated 31 October 1968 by Mr. D. A. Duff and 18 November 1969 by Mr. G. E. Moody), exist variously covering exploration of the deposits and development of the mine. In summary, these reports record that a

total of 86,800 tons of ore at average cut and uncut grades of 0.74 ounces and 1.15 ounces of gold per ton (64,232 ounces and 99,820 ounces of gold respectively), plus an additional 76,000 tons at an average uncut grade of 0.086 ounces of gold per ton (6,536 ounces of gold), were drill indicated in the vein zones, with the bulk of the material in oreshoots within the number 2 vein zone. The reports also record that some 28,600 tons of ore calculated to have had an average recovered grade of 0.67 ounces of gold per ton (19,123 ounces of gold) were mined during development work, with the ore mainly coming from the 250 feet level and above in the number 2 vein zone (records of the Quebec Department of Mines show past production of 32,000 tons of ore at an average grade of 0.51 ounces of gold per ton (16,320 ounces of gold)). Thus, depending upon which of the above figures taken from consultants' reports are accepted, in the range of 51,645-87,233 ounces of gold remain unmined within the drill-indicated tonnages. Furthermore, it would appear that more comprehensive exploration and assessment of the vein zones to discover additional ore by drilling and underground development is certainly warranted, both laterally and in depth, because appropriate activity to date has only been relatively restricted. However, the possibility should not be overlooked that the drilling and underground development conducted to date may have already revealed the best sections of the vein zones, particularly as such a suggestion has been made in some quarters. Details pertaining to each of the vein zones, essentially based on Dr. Ingham's report, are presented separately below.

(i) Number 1 vein zone. — The principal vein in this zone, which is known as the Ascot vein, is centred some 360 feet southeast of the mine shaft, and there is a further sub-parallel vein indicated about 120 feet east of this. The vein zone occurs in metabasalt striking north-northeast-south-southwest, with the principal vein dipping almost vertically. The discontinuous structure of the principal vein is over 200 feet long, pinching and swelling along its strike, the oreshoot reportedly indicated on it by surface observations in old trenches and drilling being 150 feet long with an average 3.2 feet width extending

from surface to a depth of 250 feet, and containing 12,000 tons of drill-indicated ore at average cut and uncut grades of 0.40 ounces and 0.84 ounces of gold per ton.

(ii) Number 2 vein zone. — This structurally complex vein zone commences some 140 feet south-southwest of the mine shaft and it contains at least seven sub-parallel components striking east-northeast-west-southwest for a composite distance of some 600 feet over a north-south extent of about 230 feet. The vein zone essentially occurs in metabasalt, but also to a limited extent in serpentinite, and a small gabbro intrusion is associated in the south, with a feldspar porphyry dyke in the north. There are two main veins, designated 2A and 2B, located in the northern part of the zone lying 10-30 feet apart with an approximate 65 degrees dip north, and they are in reasonably close association with the porphyry dyke. Two relatively low-grade veins, designated 2C and 2D, lie close and sub-parallel to the south of veins 2A and 2B, with three reasonably high-grade short veins, designated 2E, 2F and 2G, located within the gabbro intrusion and lying some 60-130 feet south of vein 2D. The high-grade ore defined by drilling in this vein zone is reported as occurring in ore shoots on veins 2A and 2B along 120 feet strike lengths to depths of 400 feet with average widths respectively of 7 feet and 8.5 feet, the total quantity of drill-indicated ore in the two ore shoots amounting to 74,800 tons at average cut and uncut grades of 0.75 ounces and 1.21 ounces of gold per ton. The 76,000 tons of drill-indicated ore at an average uncut grade of 0.086 ounces of gold per ton also lies within various components of the number 2 vein zone.

(iii) Number 3 vein zone. — This vein zone lies some 260 feet north of the mine shaft in metabasalt and serpentinite, with a small gabbro intrusion intimately associated, and feldspar porphyry dykes in close proximity to the south. The vein zone apparently contains at least four sub-parallel components striking east-northeast-west-southwest for a composite distance of some 280 feet over a north-south extent of about 50 feet and with an approximate 75 degrees dip north. Exploration of the vein zone by drilling reportedly indicated

erratic intersections of high and low grade within a range of 0.07-2.16 ounces of gold per ton, including core lengths of 1 foot at 2.16 ounces of gold per ton, 7.2 feet at 0.43 ounces of gold per ton, 10 feet at 0.22 ounces of gold per ton and 14.5 feet at 0.17 ounces of gold per ton, the average grade in nine boreholes having been 0.24 ounces of gold per ton. However, despite subsequent development work involving underground drifting, essentially on the 250 feet level, the definition of specific ore shoots and tonnage quantification did not prove possible due to the irregular nature of the mineralization encountered.

(b) Other locations

None of the other occurrences appear to be of outstanding importance in themselves, but their existence in different geological environments is significant because it demonstrates the widespread nature of such gold mineralization. Available details pertaining to the occurrences are presented and considered separately below.

(i) Number 4 vein zone. — Located some 2,300-2,500 feet north and north-northwest of the Malartic Hygrade mine shaft close to the northern boundary of the property, this vein zone, previously designated number 4, reportedly extends over an approximate east-west strike length of some 1,260 feet. The zone was defined by drilling, which revealed scattered gold values in serpentinite with porphyritic dykes and brecciated gabbro associated. Individual intersections encountered in the drilling indicated grades within the range of 0.03-0.40 ounces of gold per ton for core lengths within the range of 3-5 feet, only the two most important intersections being shown in Figure 2. Of particular significance concerning this zone is the fact that it straddles the line of the Norbenite-Norlartic fault, and for this reason alone it deserves further investigation by diamond drilling.

(ii) Number 7 vein zone — The surface projection of this vein zone, previously designated number 7, is situated some 2,230 feet southwest of the Malartic Hygrade mine shaft. However, it has not been determined whether the zone outcrops at surface because its existence has only been defined in depth by drilling, the

results of drilling having reportedly indicated that the zone has a west-northwest-east-southeast strike length of about 200 feet with an approximate 60 degrees dip north extending from 150 feet to 350 feet depth at an average grade of 0.35 ounces of gold per ton.

An exploration/development drift on the 400 feet level extending southwest from the Malartic Hygrade mine shaft was commenced during the early 1960s for the purpose of investigating the zone, but, according to the available information, the drift was incomplete at a distance of some 1,335 feet from the projected position of the zone at the 400 feet level when mining operations were terminated. Before any extension of such exploration/development activity is undertaken, further investigation of the zone by diamond drilling from surface is required to provide more detailed definition in order to justify driving the long drift. However, other circumstances may contribute towards warranting extension of the drift, such as underground exploration of the Malartic Hygrade porphyry, as indicated in Section 3.2.2.

(iii) East section of property — A number of the occurrences are scattered throughout that section of the property lying east of the Malartic Hygrade mine shaft, the best intersections reportedly having values of 0.38 ounces of gold per ton across 2 feet, 0.20 ounces of gold per ton across 4.5 feet, 0.18 ounces of gold per ton across 5 feet, and 0.15 ounces of gold per ton across 3.7 feet. The various occurrences are located in different geological environments, the most notable comprising a group closely associated with a fold in the northeast of the property, whilst others are situated along the line of the Norbenite-Norlartic fault. None of the occurrences appear to have been exhaustively explored, and they could well repay further attention by comprehensive diamond drilling programmes.

3.2.5 Norbenite-Norlartic fault

Various references have already been made in Sections 2 and 3.1, as well as in parts of the above detailed consideration, with respect to the gold potential along the length of the Norbenite-Norlartic fault. This structure traverses the property in a northwest-southeast direction with a trend sub-parallel to the Cadillac

Break, as illustrated in Figure 2. It is considered that the whole length of the structure situated on the property has potential, the latter being enhanced by the previous discovery of occasional intimately-associated gold occurrences along the fault, as well as by the existence of gold deposits on the main structure and a sub-parallel unit at the Norlartic, Marban and Little Long Lac mines short distances to the southeast.

The potential importance of the structure does not appear to have been fully recognized, and it deserves more comprehensive investigation than it seems to have attracted in the past. This observation has not overlooked the fact that exploration by diamond drilling has previously been conducted at various points on the structure, including a series of boreholes at approximate 500 feet spacings along a strike length of some 6,500 feet extending northwest from the southern boundary of the property. Nevertheless, the exploration to date can only be regarded as relatively limited, and further work involving geophysics and diamond drilling is considered to be warranted. As already indicated, the whole length of the structure merits more comprehensive investigation because of its potential, but the combination of the structure with associated gabbro sills in the northwest of the property presents a particularly attractive target that appears to have been largely neglected in the past.

4. Conclusions

The Malartic Hygrade property has substantial gold potential, the most important known at present being in the extension of the Camflo porphyry onto the property at depth. Quantification and valuation of the porphyry ore (including ore in intimately associated sediments) are variously dealt with in Section 3.2.1 and Appendix 1. In addition to the porphyry ore, it should be noted that important gold values occur in the adjacent rocks, particularly along fault/shear zones in gabbro sills, which also pass onto the Malartic Hygrade property at depth. However, it is impossible to quantify and value such potential on the property in a realistic manner at this stage.

Although the largest and most important known gold occurrence on the Malartic Hygrade property lies in



An aerial view of the company's existing mine facility.

the extension of the Camflo porphyry and adjacent rocks at depth, the potential is certainly not restricted to such situations. Thus, the various quartz veins and disseminations on the property cannot be disregarded, particularly the exceptionally high-grade vein zones located close to the Malartic Hygrade mine shaft upon which the mining operation was established during the early 1960s. Based on the data presented in Section 3.2.4(a), the drill-indicated ore remaining unmined in these high-grade vein zones is calculated to contain in the range of 51,645-87,233 ounces of gold, and there is potential for the discovery of additional ore.

It is impossible to quantify the gold potential in any other instance with respect to the property, but further situations of interest do occur. Such situations include the Malartic Hygrade porphyry, as considered in Section 3.2.2, and other similar porphyry intrusions if the latter prove to exist. Apart from those adjacent to the Camflo porphyry, other gabbro sills also have potential, and such intrusions are particularly prominent in the southwest and northwest of the property, data concerning these being presented in Section 3.2.3. In addition, amongst the various structures warranting attention, the whole length of the Norbenite-Norlartic fault traversing the property particularly deserves more comprehensive investigation than it appears to have

attracted in the past in view of its potential, as discussed in Section 3.2.5.

Whilst any further exploitation of gold occurrences on the Malartic Hygrade property is most likely to require underground-mining operations, another possibility does exist. This would involve the open pit mining at high-tonnage levels of relatively low-grade material occurring at and close to surface, with extraction of the gold by leaching. Reference has been made in Section 3.2.3 to such a possibility with respect to the gabbro sills that outcrop in the northwest and southwest of the property. However, the possibilities are not restricted to these situations because other gold occurrences could prove amenable to the suggested form of exploitation, including vein zones and mineralization along the Norbenite-Norlartic fault, with the latter not only embracing where the structure cuts gabbro sills but also elsewhere. As compared with underground-mining and milling operations, the particular attraction of low-grade high-tonnage open pit-mining operations, with gold extraction by leaching, lies in their relative simplicity of establishment and conduct coupled with their low cost.

Figure 1

Malartic Hygrade Gold Mines (Canada) Limited
Malartic township, Quebec, Canada
Property location and communications

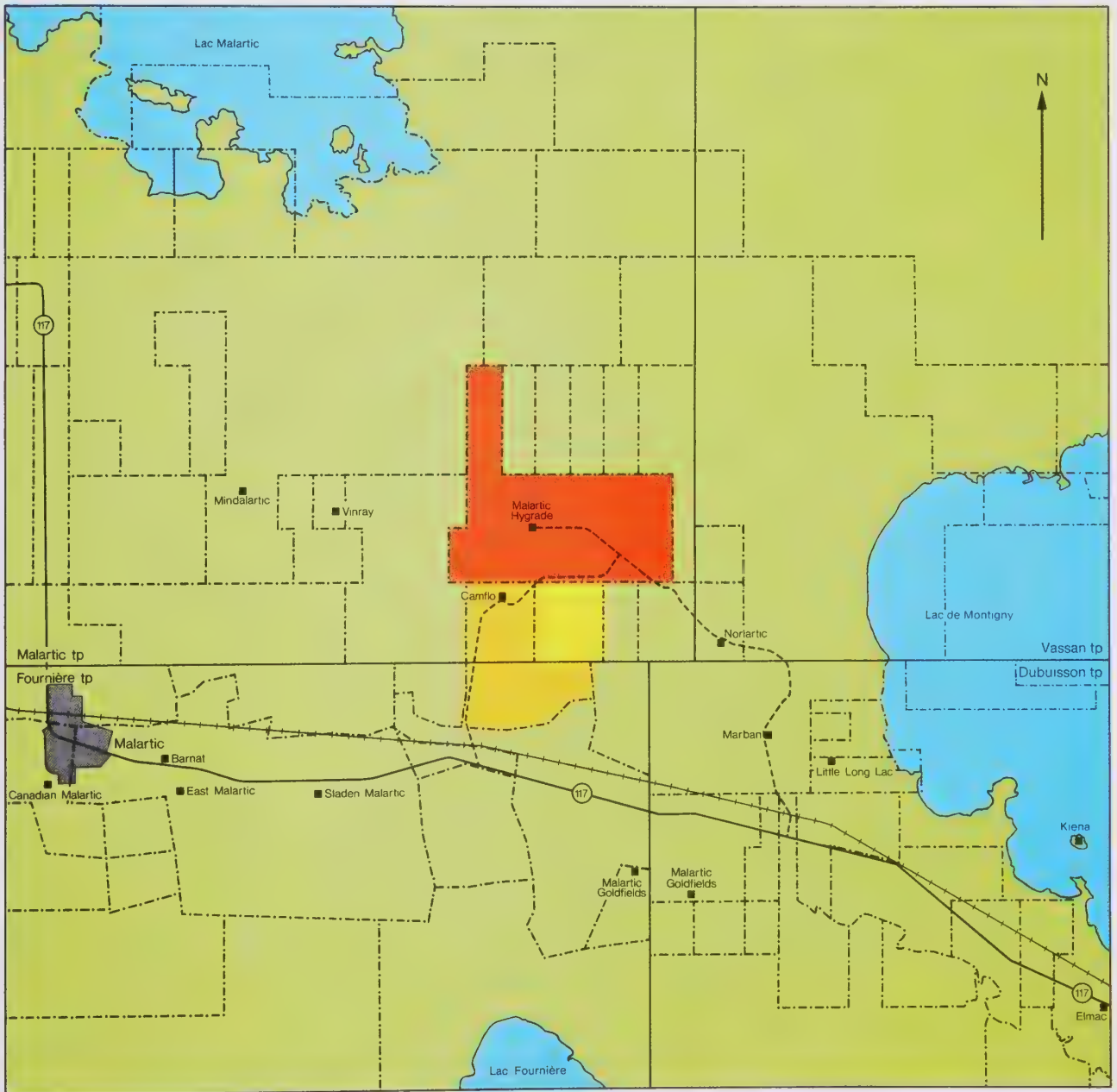
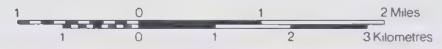
B.L.Hodge and Partners, London

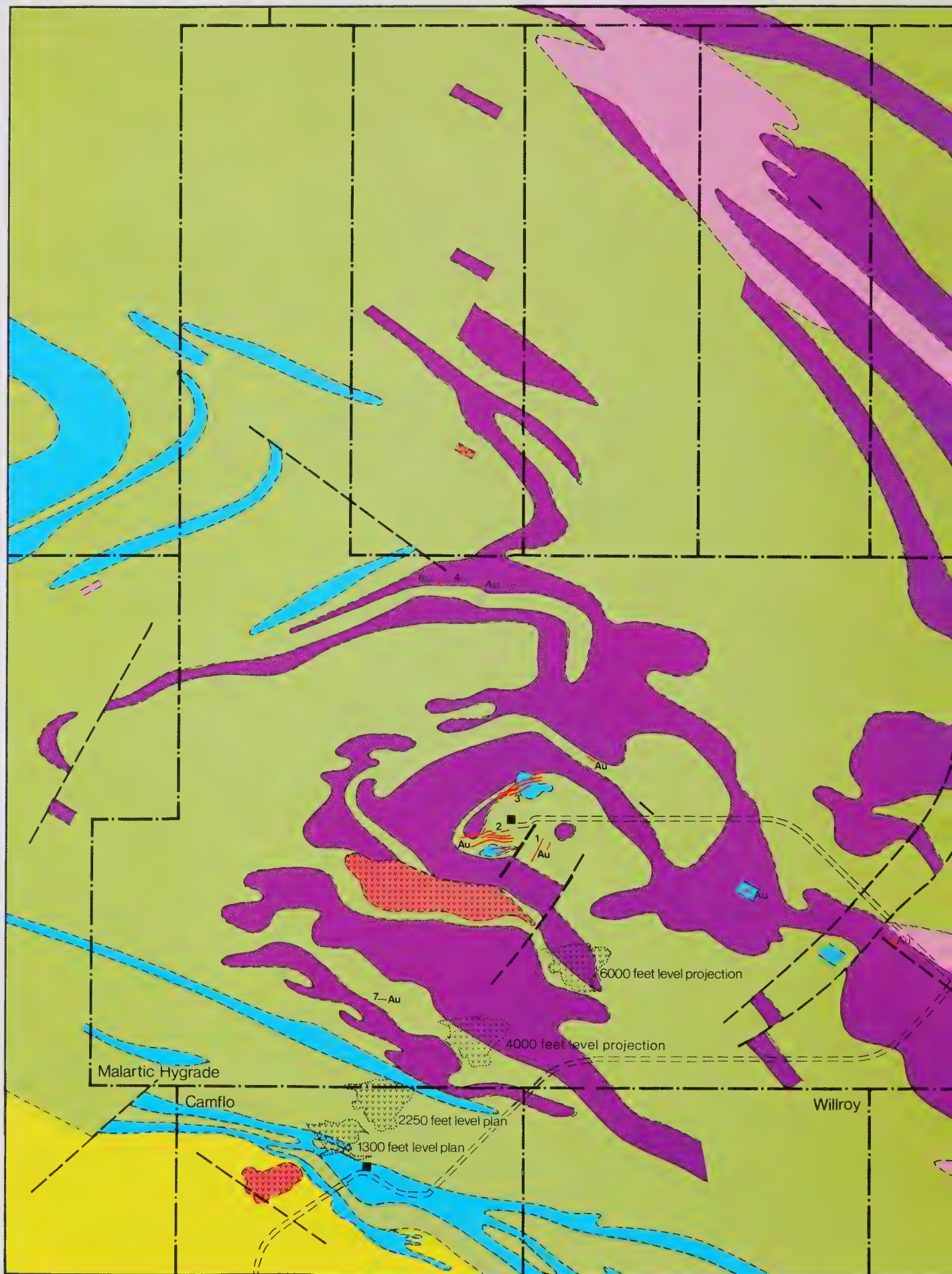
December 1980



Legend

- Camflo property
- Malartic Hygrade property
- Willroy property
- Mineral property boundary
- Canadian National railway
- Township boundary
- Provincial highway
- Dirt road
- Mine shaft





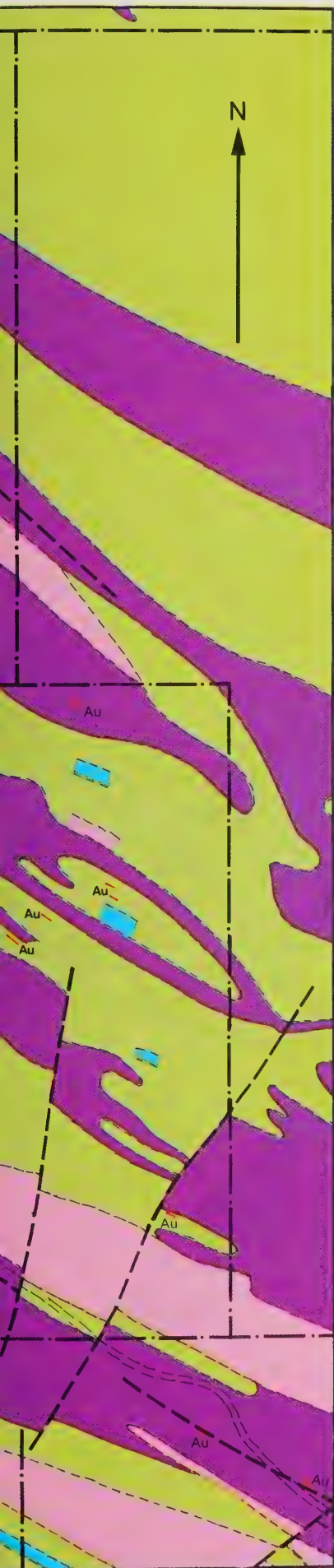


Figure 2

Malartic Hygrade Gold Mines (Canada) Limited
Malartic township, Quebec, Canada

Solid geology

B.L.Hodge and Partners, London December 1980

Legend

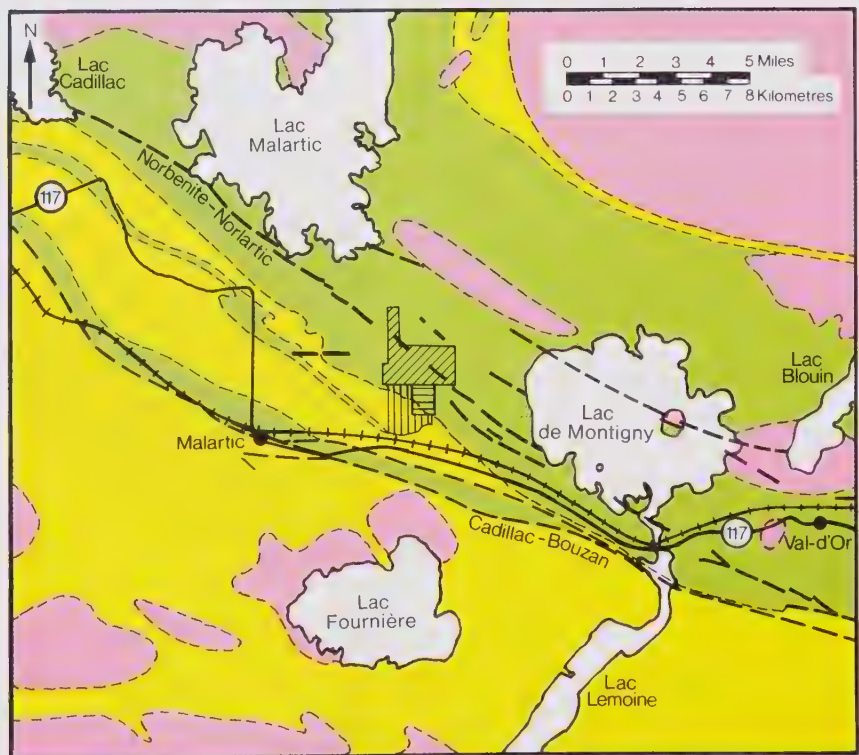
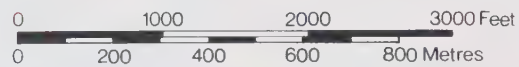
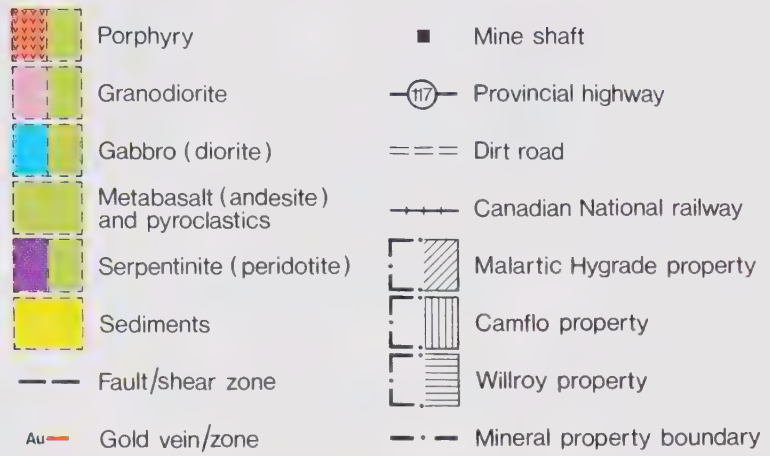


Figure 3

Malartic Hygrade Gold Mines (Canada) Limited

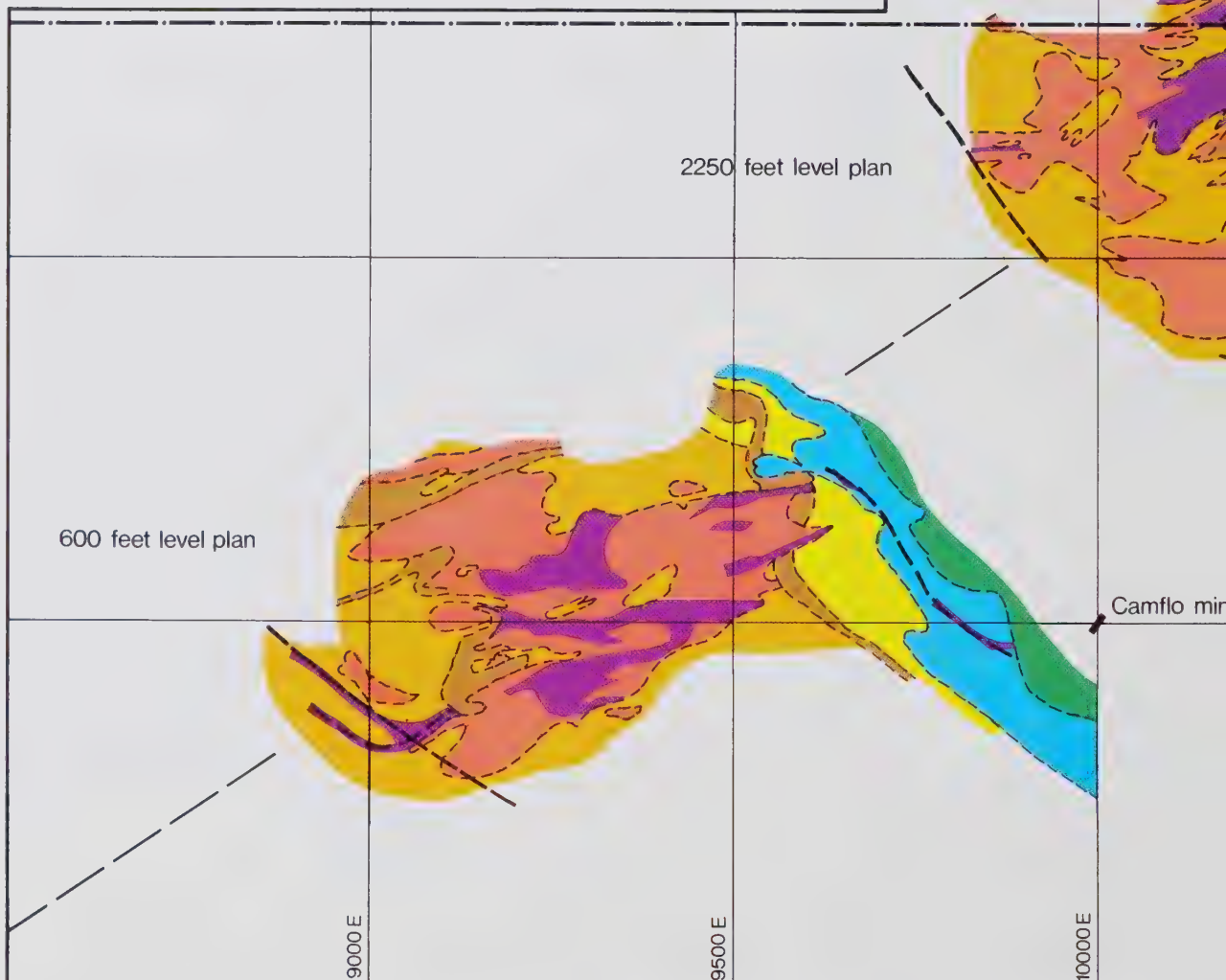
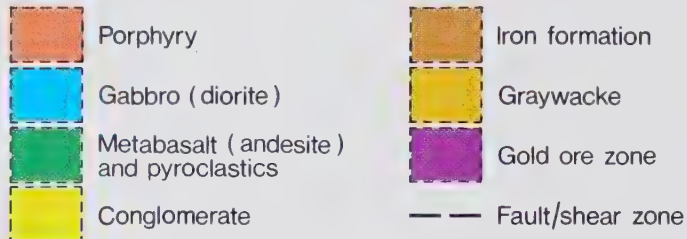
Malartic township, Quebec, Canada

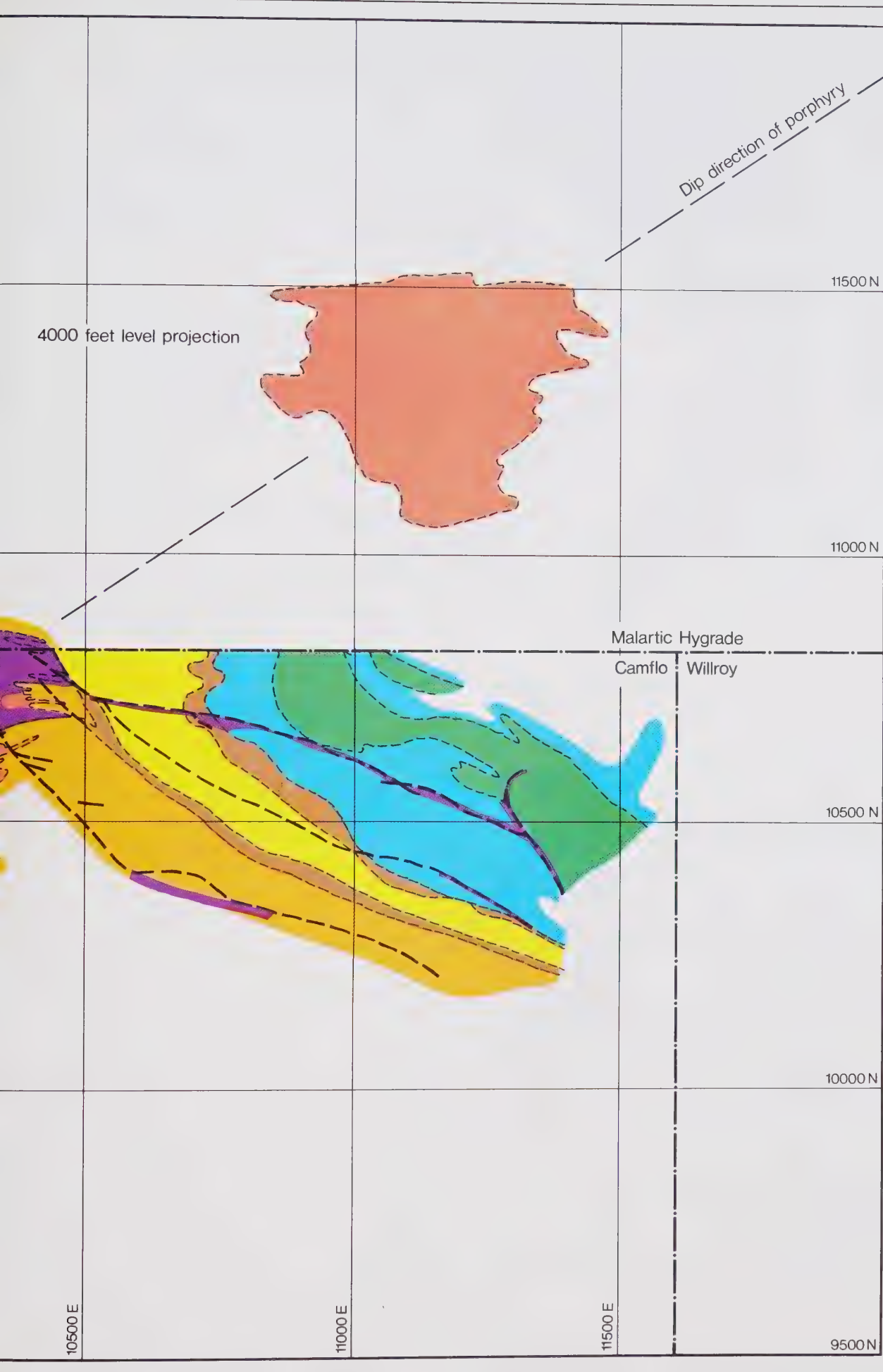
Composite plan of the Camflo porphyry

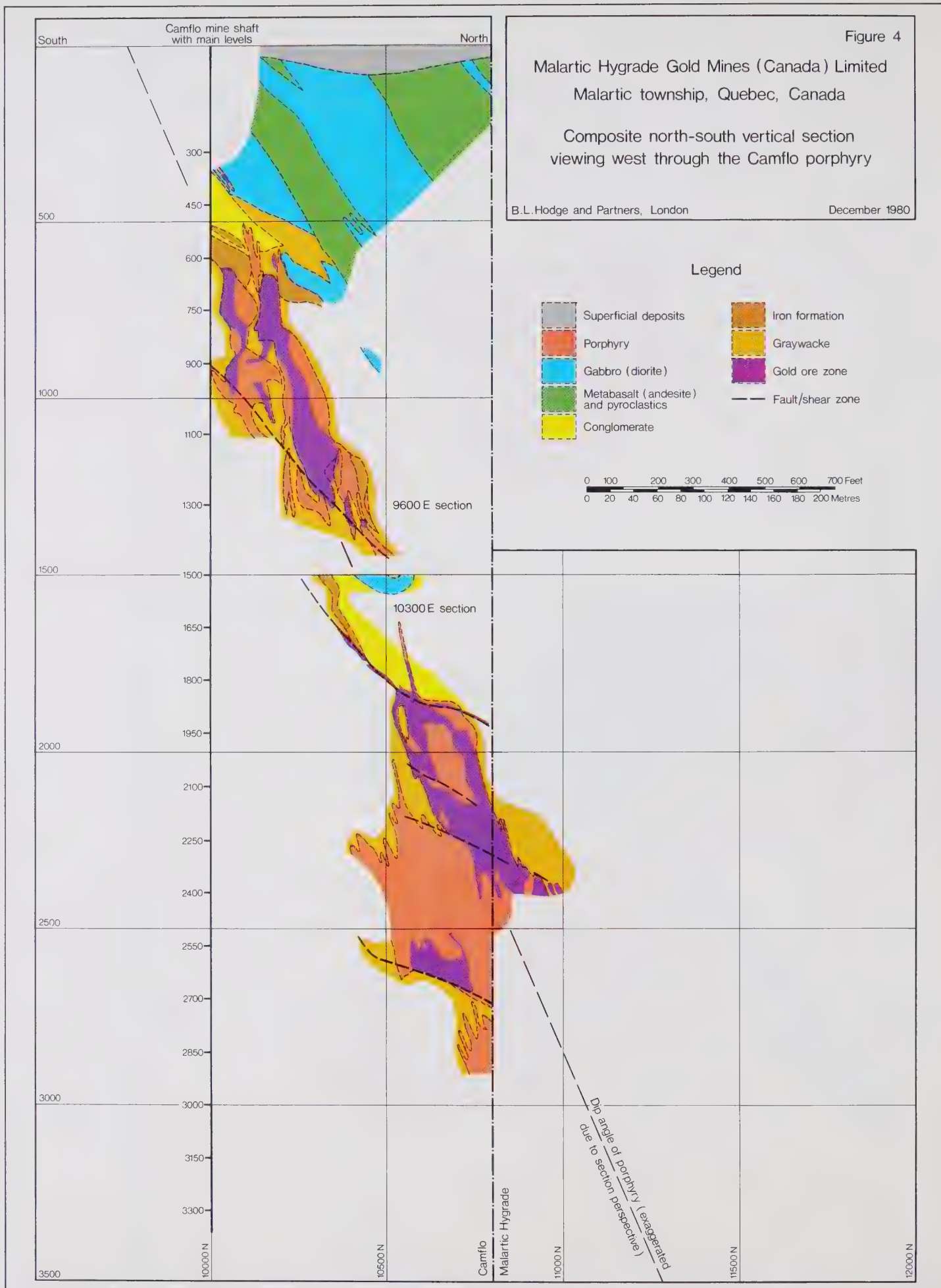
B.L.Hodge and Partners, London

December 1980

Legend







Appendix 1

Estimates of Porphyry Ore Tonnage, Gold Content, Gold Value, Mine/Mill Operating Cost and Revenue

Camflo mine level (feet)	2,100-3,500	2,100-4,000	2,100-6,000
Cumulative total tons of ore (1)	2,172,000	3,322,000	7,922,000
Cumulative total ounces of gold (1)	545,172	833,822	1,988,422
Cumulative value of gold			
At US\$200 per ounce	109,034,400	166,764,400	397,684,400
At US\$300 per ounce	163,551,600	250,146,600	596,526,600
At US\$400 per ounce	218,068,800	333,528,800	795,368,800
At US\$500 per ounce	272,586,000	416,911,000	994,211,000
Mine/mill operating cost (2)			
At US\$15 per ton of ore	32,580,000	49,830,000	118,830,000
At US\$20 per ton of ore	43,440,000	66,440,000	158,440,000
At US\$25 per ton of ore	54,300,000	83,050,000	198,050,000
At US\$30 per ton of ore	65,160,000	99,660,000	237,660,000
Revenue at US\$200 per ounce of gold (3)			
At US\$15 per ton of ore operating cost	76,454,400	116,934,400	278,854,400
At US\$20 per ton of ore operating cost	65,594,400	100,324,400	239,244,400
At US\$25 per ton of ore operating cost	54,734,400	83,714,400	199,634,400
At US\$30 per ton of ore operating cost	43,874,400	67,104,400	160,024,400
Revenue at US\$300 per ounce of gold (3)			
At US\$15 per ton of ore operating cost	130,971,600	200,316,600	477,696,600
At US\$20 per ton of ore operating cost	120,111,600	183,706,600	438,086,600
At US\$25 per ton of ore operating cost	109,251,600	167,096,600	398,476,600
At US\$30 per ton of ore operating cost	98,391,600	150,486,600	358,866,600
Revenue at US\$400 per ounce of gold (3)			
At US\$15 per ton of ore operating cost	185,488,800	283,698,800	676,538,800
At US\$20 per ton of ore operating cost	174,628,800	267,088,800	636,928,800
At US\$25 per ton of ore operating cost	163,768,800	250,478,800	597,318,800
At US\$30 per ton of ore operating cost	152,908,800	233,868,800	557,708,800
Revenue at US\$500 per ounce of gold (3)			
At US\$15 per ton of ore operating cost	240,006,000	367,081,000	875,381,000
At US\$20 per ton of ore operating cost	229,146,000	350,471,000	835,771,000
At US\$25 per ton of ore operating cost	218,286,000	333,861,000	796,161,000
At US\$30 per ton of ore operating cost	207,426,000	317,251,000	756,551,000

(1) As considered and quantified in Section 3.2.1. It should be specifically noted that the tonnages and grade solely relate to the extension of the Camflo porphyry (including intimately associated sediments) onto the Malartic Hygrade property.

(2) The 1979 annual mine/mill operating cost for the Camflo operation was C\$14.47 per ton of ore. This cost includes exploration, development, mining, milling, marketing and general (inclusive of local but not head office overheads) expenses, with no allowance for depreciation and amortization.

(3) Derived by deducting the appropriate operating cost from the gold value.

Appendix 2

Certificate

I, DR. BRIAN L. HODGE, Senior Partner of B. L. Hodge and Partners, London, England, do hereby certify as follows:

1. I am a Geologist and Chartered Engineer carrying on a minerals industry consulting practice with offices at Woodcock House, 37 High Street, Wimbledon, London SW19 5BY, England.

2. I attended Durham University, England, where I gained the Bachelor of Science and Doctor of Philosophy degrees in Geology. I am a Fellow of the Institution of Mining and Metallurgy, a Fellow of the Geological Society of London, a Member of the American Institute of Mining Engineers, and a Member of the Society of Economic Geologists. I have had some 23 years' post-graduate experience within the minerals industry in the fields of research, exploration and development, mining, milling, mineral economics and management in the university world, industry and as a consultant in Angola, Australia, Canada, the Central Pacific, China, France, Ireland, Italy, Kenya, Mexico, Nigeria, Pakistan, South Africa, Spain, Thailand, the UK and the USA.

My partnership colleagues and associates who have been or are variously involved in the activities of Malartic Hygrade Gold Mines (Canada) Limited, especially Mr. R. P. Bligh, Dr. A. R. Drysdall, Dr. G. J. H. McCall, Mr. R. Phillips and Mr. A. B. St. J. Webb, are also all highly qualified and widely experienced.

3. I and my partnership colleagues and associates have no interest either directly or indirectly, nor do we expect to receive any interest either directly or indirectly in the property or securities of Malartic Hygrade Gold Mines (Canada) Limited, except such agreed fees and expenses as may be paid to B. L. Hodge and Partners for services rendered as consultants in accordance with our normal terms of business.

4. My accompanying report to Malartic Hygrade Gold Mines (Canada) Limited has been produced at the specific request of the officers in order to present a comprehensive and objective assessment of the gold potential on the company's property located in Malartic Township, Quebec, Canada. The report is based on the previous and current activity concerning the property conducted by B. L. Hodge and Partners, including our reports dated October 1974, October 1976 and December 1977, together with all other available data.

B. L. Hodge

December 1980

Financial Statements

September 30, 1980

Auditors' Report

To the Shareholders of

Malartic Hygrade Gold Mines (Canada) Ltd.:

We have examined the balance sheet of Malartic Hygrade Gold Mines (Canada) Ltd. as at September 30, 1980, and the statements of deferred development, preproduction and administrative expenditures and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the company as at September 30, 1980, and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied, after giving retroactive effect to the change in depreciation policies referred to in Note 1, on a basis consistent with that of the preceding year.

Toronto, Ontario.
November 10, 1980.

MacGillivray & Co.
Chartered Accountants

Malartic Hygrade Gold Mines (Canada) Ltd.

Balance Sheet

As at September 30, 1980

Assets	1980	1979
Current		
Cash	\$ 479,885	\$ —
Term deposits	1,100,000	124,000
Accounts receivable	28,002	32,686
Prepaid expenses	29,507	7,165
	<u>1,637,394</u>	<u>163,851</u>
Fixed (Note 2)	<u>68,519</u>	<u>94,464</u>
Mining Properties and Licences (Note 3)	<u>1,758,500</u>	<u>1,758,500</u>
Deferred Expenditures	<u>2,377,447</u>	<u>2,059,672</u>
	<u>\$5,841,860</u>	<u>\$4,076,487</u>

Liabilities

Current		
Bank indebtedness	\$ —	\$ 10,097
Accounts payable and accrued liabilities	67,867	6,830
Due to Camflo Mines Limited (Note 6)	14,433	—
Deferred revenue (Note 6)	30,000	—
	<u>112,300</u>	<u>16,927</u>
Deferred Revenue (Note 6)	<u>1,170,000</u>	<u>—</u>

Shareholders' Equity

Capital Stock (Note 5)	<u>4,687,001</u>	<u>4,187,001</u>
Deficit	<u>127,441</u>	<u>127,441</u>
	<u>4,559,560</u>	<u>4,059,560</u>
	<u>\$5,841,860</u>	<u>\$4,076,487</u>

Hyman S. Goldstein

Approved by the Board

, Director

Peter Jarvis
, Director

Statement of Deferred Development, Preproduction and Administrative Expenditures

For the Year Ended September 30, 1980	1980	1979
Development and Preproduction Expenses		
Government fees and licences	\$ 438	\$ 438
Insurance and taxes	8,627	8,620
Mine salary and benefits	7,011	8,124
Feasibility studies	79,105	—
Preproduction expenses (Note 6)	14,433	—
	109,614	17,182
Administrative Expenses		
Accounting and audit fees	7,032	4,025
Consulting fees	19,000	12,000
Depreciation	28,550	40,300
Directors' fees and expenses	9,928	9,888
General	10,582	5,169
Legal fees	25,950	26,065
Office expense	28,066	9,520
Office rent	5,560	4,880
Office salaries	13,944	—
Officers' salaries and allowances	15,500	5,900
Printing and stationery	15,593	4,776
Telephone	20,211	6,610
Transfer agent fees	8,451	2,781
Travelling	48,446	5,885
	256,813	137,799
Total Current Expenditures	366,427	154,981
Less: Interest earned	26,638	17,449
Overhead recovery	22,014	10,867
	48,652	28,316
Net Current Expenditures	317,775	126,665
Deferred Expenditures, Beginning of Year		
As previously reported	1,017,068	930,703
Adjustment of prior years' depreciation (Note 1)	1,042,604	1,002,304
As restated	2,059,672	1,933,007
Deferred Expenditures, End of Year	\$2,377,447	\$2,059,672

Statement of Changes in Financial Position

For the Year Ended September 30, 1980

	1980	1979
Working Capital Derived From		
Issue of shares from conversion of warrants	\$ 500,000	\$ —
Non-current portion of deferred revenue	1,170,000	—
	<u>1,670,000</u>	<u>—</u>
Working Capital Applied To		
Deferred expenditures	289,225	86,365
Purchase of fixed assets	2,605	—
	<u>291,830</u>	<u>86,365</u>
Increase (Decrease) In Working Capital	1,378,170	(86,365)
Working capital, beginning of year	146,924	233,289
Working Capital, End of Year	<u>\$1,525,094</u>	<u>\$ 146,924</u>

Notes to the Financial Statements

September 30, 1980

Note 1: Significant Accounting Policies

(a) Fixed Assets

In 1980 the company commenced taking depreciation on its fixed assets at the following annual rates:

Building machinery and equipment	30%
Furniture and fixtures	20%

Leasehold improvements will be amortized over the term of the related lease. The depreciation expense has been charged to deferred expenditures. In previous years the fixed assets have been carried at cost. The financial statements of prior years have been restated to apply the taking of depreciation retroactively. The effect of the accounting change has been to increase deferred expenditures in the current year by \$28,550 (1979 — \$40,300) and to increase cumulative deferred expenditures by \$1,002,304.

(b) Mining properties and Licences and Deferred Expenditures

Licence costs, claims costs, associated development costs and carrying costs are capitalized when incurred. When any lease expires, the cost of the lease plus any related deferred charges are written off to deficit in the year of expiry.

Note 2: Fixed Assets

	Cost	Accumulated Depreciation	Net Book Value	
			1980	1979
Buildings, machinery and equipment	\$ 1,134,560	\$ 1,069,155	\$ 65,405	\$ 93,436
Furniture and fixtures	4,073	1,999	2,074	1,028
Leasehold improvements	1,040	—	1,040	—
	<u>\$ 1,139,673</u>	<u>\$ 1,071,154</u>	<u>\$ 68,519</u>	<u>\$ 94,464</u>

Note 3: Mining Properties and Licences

The company owns a mining concession covering 40.5 hectares and nine mining development licences covering a total of 540 hectares in the Township of Malartic in the Province of Quebec.

Note 4: Remuneration of Directors and Officers

The aggregate direct remuneration paid or payable to the directors and senior officers as defined by the Ontario Business Corporations Act amounted to \$43,926 (1979 — \$10,150).

Note 5: Capital Stock

	1980	1979
Authorized 5,000,000 Shares of no par value, aggregate issue consideration not to exceed \$15,000,000		
Issued 3,491,687 Shares (1979 — 3,441,687)	<u>\$4,687,001</u>	<u>\$4,187,001</u>

During the year, 50,000 share purchase warrants were exercised to purchase 50,000 shares. Total consideration received by the company amounted to \$500,000.

By resolution dated March 15, 1979, the date for exercising the share purchase warrants was extended to March 31, 1989, at the price of \$10 per share. As at September 30, 1980 there were 100,000 share purchase warrants outstanding.

Note 6: Camflo Mines Limited

(a) The Company entered into an agreement dated May 28, 1980, with Camflo Mines Limited which allows for the extraction and milling of the Company's ore through facilities owned by Camflo Mines Limited. This agreement specifies that net revenues be shared 60% by Malartic Hygrade Gold Mines (Canada) Ltd. and 40% by Camflo Mines Limited. In addition \$1,200,000 was received by the Company as an advance royalty for the right to extract the first one million, two hundred thousand tons of ore. This payment is non-refundable in the event of termination of the agreement prior to the extraction of this ore and the amount of royalty expected to be earned over the next year, as determined from the agreement between the Company and Camflo Mines Limited, amounts to \$30,000, representing the extraction of thirty thousand tons of ore.

(b) Accumulated preproduction expenses incurred by Camflo Mines Limited in respect of the Company's property to September 30, 1980, amounted to \$24,055. The Company's share of this amount is \$14,433 (60%). The payment of this amount is contingent upon the property being brought into profitable operation.

Note 7: Comparative Figures

Certain 1979 comparative figures are reclassified to conform with the financial statement presentation adopted for 1980.

Malartic
Hygrade
Gold Mines
(Canada) Ltd.